

**ABSTRACT****A METHOD FOR PRODUCING A FERROELECTRIC CAPACITOR AND A  
FERROELECTRIC CAPACITOR DEVICE**

A method for fabricating a device and a device, such as a ferroelectric capacitor, having a substrate, a contact plug through the substrate, a first barrier layer on the substrate, a first electrode on the first barrier layer, a dielectric layer on the first electrode, and a second electrode on the dielectric layer, comprises etching the second electrode and the dielectric layer of the device using a first hardmask, to shape the second electrode and the dielectric layer. The first hardmask is then removed and one or more encapsulating layers are applied to the second electrode and the dielectric layer. A further hardmask is applied to the one or more encapsulating layers. The first electrode is then etched according to the second hardmask down to the first barrier layer and the second hardmask is then removed from the one or more encapsulating layers.